W6IFE Newsletter

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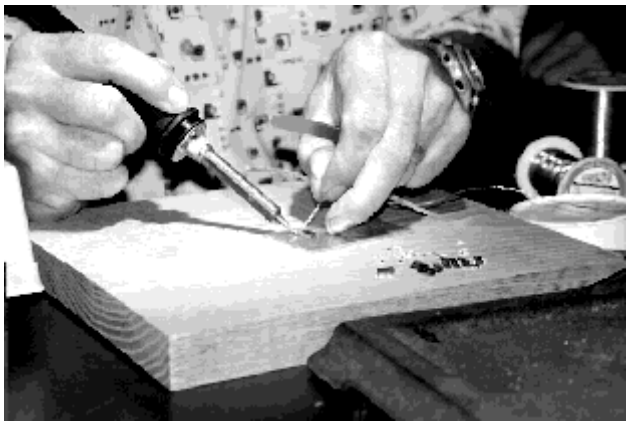
At the 1 **April 2004** meeting of the SBMS, John Hoot will talk about "Astronomy and microwaves". Make sure you bring something from your first amateur radio station if you have any thing left. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway) in Corona, CA at 1900 hours local time on the first Thursday of each month. Check out the SBMS web site at http://www.ham-radio.com/sbms/.

SBMS meeting parking- We have become a great number of members at meetings. We park next to the church in the adjacent lot or on the street and or in the lot across the street. Across the street the sign on the building shows: 1025 Main Street. MAIN STREET BISTRO. The sign on the parking lot says: CLIN CHIROPRACTIC CARE Dick, WB6DNX

Elections- We missed the annual nominations for 2004-5 officers at the March meeting, so we take nominations at the April 1 meeting and hold elections at the May meeting.

Last meeting- Last meeting Dave, WA6CGR had a fine presentation on how to mount those little parts on a printed circuit board. Several people brought in video equipment to allow every one to see up close what Dave was doing on the board with the tiny parts and the big soldering iron. Good show everyone. Bob Kendall, WA6VHS was our visitor from Lomita. Welcome to new member Richard Echternacht KB0EMR of Des Moines IA. Doug, K6JEY, Dennis WA6NIA and Chuck, WA6EXV went to the Owens Valley Radio Observatory conference on 28 February and came away with a desire to promote Amateur microwave Earth-Moon-Earth work. Doug is writing a proposal to the Observatory to suggest the use of the 40 meter Telescope be used on special days to promote young student understanding of radio astronomy through the use of the telescope as a amateur EME tool to make contact with students around the world using microwaves as n outreach program of Cal Tech. Chris, N9RIN was given up to $100 for door prizes at the upcoming SBMS banquet. 26 people present.



Dave, WA6CGR hands putting the small surface mount parts on a board during the demonstration at the 4 March SBMS meeting.

Photos in this edition are by Kurt, K6RRA.

Awards presented- At the 4 March 2004 SBMS meeting- The ARRL 10 GHz and Up Contest top 10 GHz only score plaque was presented to Mike, W6YLZ/XE2. Gary, AD6FP/XE2 will be receiving the top 10 GHz and Up score plaque. Glenn, KE6HPZ received the top US 10 GHz score plaque. Lars, AA6IW will be receiving the top US 10 GHz and Up score plaque. Chip, N6CA received a certificate installing him as a SBMS Senior Technical Member. Ken, W6DTA received a certificate as a SBMS Senior Member (Ken was also second in the 10 GHz and Up DX category). Bill, WA6QYR received a plaque for Life Time Achievement (see words later in this edition).

Mike.W6YLZ/XE2 receiving his plaque for being DX high score in the ARRL 10 GHz and Up Cumulative Contest from SBMS president Dick, WB6DNX.

Glenn, KE6HPZ receiving his certificate for the US high score in the ARRL 10 GHz and Up Cumulative Contest from SBMS president Dick, WB6DNX

Chip, N6CA receiving his certificate of being SBMS Senior Technical Member from SBMS President Dick, WB6DNX.

Ken, W6DTA receiving his certificate of election to Senior Member from SBMS president Dick. WB6DNX.

A reminder that the third Saturday of each month is Microwave Activity Day starting after the Pomona/ Cal Poly Swap meet through mid afternoon.

Scheduling

1-2 May SBMS 2 GHz and Up contest.

6 May SBMS meeting talk TBD

3 June SBMS meeting talk TBD

12-14 June ARRL June VHF QSO Party

26-27 June ARRL Field Day

1 July SBMS meeting TBD

7-8 August ARRL UHF Contest

21-22 August ARRL 10 GHz and Up Contest

11-12 September ARRL September VHF QSO Party

18-19 September ARRL 10 GHz and Up Contest

14-16 October 2004 Microwave Update in Texas

"Wants and Gots for sale"

Some body wanted at Siemens TWT RWH 1125D or G; a RW 120 power supply and 24 GHz w/g relay but they didn't put down name and phone number on the sheet.

Want information on making a microstrip power splitter/ combiner Chris Shoaff N9RIN 949-388-3121

For Free- 10 ft, 10ft 6 inch, and 6 ft dishes. Up pick up Chuck WA6EXV 760-377-4972

Activity reported at the March SBMS meeting were- Dick, WB6DNX heard the SDMG 10 GHz beacon from the home QTH, Mel, WA6JBD has a 12 W TWT on 10 GHz and is rebuilding his 10 GHz rig; Chuck, WA6EXV has his 10 ft dish down to refurbish the gear train and will be painting the dish; Bill, WA6QYR had his 2 GHz transverter to show; Ed W6OYJ reported speaking at the "North Shore" club, SDMG is had 1296 MHz as the topic for the February meeting and the March meeting is to be on 2.3 GHz gear, Kerry had picked up some "reject" Mercedes-Benz 76 GHz anti-collision radars that had a 4 inch dish, +10 dBm Gunn oscillator; Howard, KG6BIB is building a DEMI 10 GHz rig; Scott K0SMU has a power supply for his 10 GHz rig; Dennis, WA6NIA went to the radio astronomy Conference; Chip, N6Cabuilt a new 10 GHz omni antenna; Chuck, N6EQ picked up some cell site parts and built a Elecraft VX222 transverter; Ed, K6ODV checked out his 5 GHz rig with new antenna; KJ6HZ had a new PC kit; Kurt, K6RRA did a demo for the Long Beach club; Jeff, K6VR built a base for a tower; visitor K6VHS did some 10 GHz rig work; Pat, N6RMJ rebuilt his rig into a new box and has 2 GHz on the air at his QTH; Dave, WA6CGR found the output of his rubidium 10 MHz reference not a good sine wave and therefore produced some strange signals in his 10 GHz rig; Glenn , KE6HPZ rearranged his shack for some new test equipment; KG6EG rebuilt his 10 GHz rig so it now has 1W output and 2.2 GHz noise figure; Wayne, KH6WZ did the 3rd rebuild of his 10 GHz rig and has a 3 GHz rig on the air; Jim, K7EME has a new mill and has a new 5 GHz to 10 GHz multiplier with keyer circuit of beacons; Ken, W6DTA rebuilt his car; Howard,WA6YGB did some 1296 MHz amplifier work and traveled to MA to visit with Tom, WA1MBA; Dick, K6HIJ machined a 3rd version of the 24 GHz waveguide switch with some Emerson echo sorb material and has an NC machine the makes WR-42 flanges; Larry, K6HLH heard the Santiago beacon and has new cables to his tower; Mike, W6YLZ now has the DB6NT 10 GHz transverter back which produces 260 mw out and has a 1.2 dB NF; Gary, W6KVC has his 10 GHz rig working and can hear PV beacon inside his house; Chris, N9RIN finished his DB6NT rig and can hear the PV beacon and now has some test equipment;

Words from Bill Burns, WA6QYR Life time Achievement Award presentation

Bill was born in Riverside on March 21, 1942 and raised in Colton. He was very active in Boy Scouts and went from Cub to Life Scout while attending school in Colton. Bill became a radio amateur when he was a Cal Poly Pomona with a call of WV6QYR. While going to college he worked at LJ Snow Ford dealership and for Pacific Bell Telephone Company. Bill met Judy at Cal Poly and they were married in 1965. Many of his and Judy's early dates were spent on T hunts.

After College he went to work for the Federal Government as an Electronics Engineer at the Naval Ship Missile System Engineering Station at Port Hueneme and spent half of his time traveling. He worked on shipboard radar. At this time bought his first International Scout 4x4 and had great fun installing a radio and talking with other hams. His interest also included Scouting as a Scoutmaster and joined the Presbyterian Church in Oxnard.

After two years Bill decided that he did not want to travel so far to work and found a job at the Naval Ordnance Laboratory in Corona. During this time Bill joined two ham clubs including the San Bernardino Microwave Society. Bill was involved with helping the City of Corona in setting up the RACES civil defense communications during a major flood disaster.

In January 1969 the estate of D. L. Thompson, W6IFE was sold off and Bill purchased Tommy's 6 ft rack containing a Rockloc rig weighing in at 200 pounds. Bill was also acquiring many dishes at this time.

That year the NOLC facility was being closed down and Bill transferred to the Naval Weapons Center China Lake where he became a member of the Sierra Amateur Radio Club, a Four Wheel Club and the local mine search and rescue group.

During many of his outings with his Scout, he scouted out roads and facilities for microwave DX record attempts from Mt Breckenridge. On June 17th 1970 Bill joined a group coming from Corona at Mojave and lead them to the site. The group included John Campbell W6NVV, Gordon Lowry, WA6ZKY and Ed Munn W6OYJ. They were hauling the W6IFE trailer mounted 6 ft dish and Ed's Rockloc rig. The next morning they easily contacted Dick Kolby, K6HIJ on Mt. Hamilton on 3300 MHz and 5700 MHz bands setting a new North American DX record of 214 miles for both bands. The SBMS club call sign W6IFE was used for the 3300 MHz record and Ed's call for the 5600 MHz. Those records stood unchallenged for many years.

When Apollo was launched Bill has assembled a receiving station using his Rockloc and an eight-foot dish. He was one of the few hams in the country that was able to hear the Apollo signals from the moon.

Bill proceeded to get his Rockloc rigs on the air and joined efforts with Chuck, WA6EXV in many projects. One of these was to change the Rockloc system (85+ vacuum tubes and two hundred pounds) to a solid state Rockloc.

One project Bill took on was the updating of the original SBMS Microwave Handbook. Another was getting the DX Records sorted out for all the microwave bands.

In 1986 the first 10 GHz Cumulative Contest would be run and Bill spent many hours and miles checking out sites in the Antelope Valley and Indian Wells Valley for good microwave sites to be used during the contest. Many of these sites required the use of topographic maps a ruler and plotting profile based upon the index of Refraction for the type of terrain. A list of these sites was distributed to anyone that would be using the desert area for contesting or for general microwave use. That year Bill took 4th place nation wide in the contest and has remained one of the most active contesters each year.

In 1988 Bill took over the writing and editing of the SBMS Newsletter and hasn't missed a beat since then. He continues to provide us with current information on activities, new equipment views, schematics, and up coming events. His dedication and endurance in this role have been awesome and much appreciated by amateur microwave operators worldwide.

In 1997 Bill retired from civil service and after a year became restless and started looking for jobs. He was hired as a part time program specialist for the Desert District Southern Sierra Council Boy Scouts. Officially he is supposed to spend 20 hours a week on the job. He often spends up to 60 hours getting every thing done, mostly volunteer. Recently he received an award because his district had received the Quality District for the first time in many years.

Bill has continually kept up with the latest microwave systems and built his own rigs for all the microwave bands from 1296 MHz through 24 GHz and is working on getting on 47 GHz. His very nice electronics shop contains

many homebrew pieces of test equipment as well as a lot of commercial units that give him the ability to test all of his projects. Bill's very large back yard contains a mired of antennas including the local ham club repeater.

Bill is always ready to give a helping hand to others to get their rigs working and will go to some mountain top to give them a good signal to evaluate their rigs or antennas. Bill has assisted many young people to become interested in ham radio and get on to get their licenses.

On behalf of the San Bernardino Microwave Society it is my privilege to present Bill burns at this time, with the society Lifetime Achievement award.

Chuck, WA6EXV

Ed, W6OYJ with a picture of Bill, WA6QYR, John Campbell and Gordon Lowry during the 214 mile 3300 and 5600 MHz record shot between Mt. Breckenridge and Mt. Hamilton in 1970.

The "Project"

The proposal as Doug, K6JEY sent out for final editing before sending it to the Owens Valley Radio Observatory.

Dear Sirs:

This is a formal request and proposal by the combined San Bernardino Microwave Society (SBMS) and the Bishop Amateur Radio Club to use the 40M dish at OVRO to conduct earth-moon-earth (EME) communications on the frequencies of 432.1, 1296.1 and 10,368.1Mhz, using no more than 100 watts output on each band. The operations should coincide with internationally scheduled activity weekends for this type of communications, but be at times where the project will not interfere with other observations at OVRO.

Because of the tremendous gain of the 40M antenna, the project will be able to provide the experience of EME communications for the first time to hundreds of amateur radio stations. It has been 20 years since such a project has been successfully carried out by amateurs and this will be the first time communications of this magnitude will have been available on 10.368Ghz if successful.

Such an event will receive wide notoriety in the amateur radio community. The project will have a several member committee to handle liaison and publicity with NASA, ISS, SAREX, AMSAT and the ARRL. The latter three are amateur organizations that have an interest and clientele who are able to use this type of communications. In addition these organizations also have existing energetic outreach programs involving youth and schools.

A special effort will be made to be able to communicate with school classrooms via portable amateur stations capable of receiving the signals from the 40M dish. Appropriate publicity and equipment requirements will be published and stations will be specifically scheduled to participate. Certificates will be issued to organizations, classes and stations that are able to successfully receive signals from the project and communications confirmation cards will be sent out to participating stations. The cards and awards will prominently feature a picture of the dish and OVRO. The project will use the SBMS club call W6IFE and will is temporarily called the "W6IFE project at OVRO". With a final title agreed to by OVRO.

A project of this magnitude takes careful planning. Both the leaders of the project named below and the participating organizations have a long history of technical and operational successes. The SBMS club has developed new equipment for microwave communications over several decades. Its members consistently have set new amateur communications records. Our technical staff consists of current and retired microwave engineers with extensive experience in designing and building microwave equipment.

Following are the major committee heads:

Douglas Millar, K6JEY, is a University Faculty and will be chief liaison to the project and have overall responsibility for the project. Mr. Millar has had similar responsibilities with National Youth Serving Agencies and has organized national events and conventions, and has been the experiment director for the ATS experiment with NASA on their ATS-1 and 3 satellites.

Mr. Dennis Kidder, WA6NIA, is a professional systems engineer and will be responsible for project coordination and schedule. This is a task he routinely carries out in his place of employment.

Wayne Yoshida KH6WZ, a professional journalist, will head the publicity committee.

Chip Angle, N6CA of Angle Linear and Chuck Swedblom, WA6EXV an engineer at the China Lake Naval Weapons Depot will head the engineering committee.

The equipment for the three bands will be housed in a standard receiver enclosure (which we have) and interface with the existing cabling and interface on the dish. The module and feed will be extensively tested before being brought to OVRO for installation. Back-end equipment and operations could be housed in the operations room in the dish.

In addition to publicity and engineering committees, others will be set up for record keeping, operator scheduling, back-end equipment inventory and acquisition, facilities (local lodging) and general support. Our group would like permission to pay for our meals at the on-site dining room.

We feel that this project is well within our technical and organizational abilities and will provide a dynamic and very worthwhile project for both our clubs and the international amateur radio community. It will also provide an outreach opportunity for OVRO that extends deeply into the amateur radio community and into educational institutions all over the world. The news articles, magazine articles, local reviews, certificates, and posters from OVRO will provide an outreach and visibility that will be widespread and unique.

Any project like this naturally involves a process of development. I look forward to having OVRO join with us in further development of a unique opportunity to combine technical challenges with community participation in the experience of EME communications. Please let us know if you would approve such a project, what additions or changes should be added and join with us in a successful adventure.

In anticipation of your affirmative response, I look forward to working with the staff at OVRO in developing a fuller description of needs, parameters and responsibilities.

Sincerely,

Douglas B. Millar K6JEY

W6IFE OVRO Project Director.

Email follow up--

Well we had some progress. I talked with Dr. Beasley at OVRO and he likes the proposal and it is being sent down to the main institution for approval with a cover letter. We may also be able to help him this summer with an outreach program for having school kids listening to lunar echoes. All sounds very positive. We may hear back from him in a month. He is also interested in more than a one-time gig. Keep your fingers crossed, Doug K6JEY

73"s

Bill

Dave, WA6CGR demonstrating how to put the itty-bitty Surface Mount parts on to a circuit board.

The San Bernardino Microwave Society is a technical amateur radio club affiliated with the ARRL having a membership of over 90 amateurs from Hawaii and Alaska to the east coast and beyond. Dues are $15 per year, which includes a badge and monthly newsletter. Your mail label indicates your call followed by when your dues are due. Dues can be sent to the treasurer as listed under the banner on the front page. If you have material you would like in the newsletter please send it to Bill WA6QYR at 247 Rebel Road Ridgecrest, CA 93555, bburns@ridgecrest.ca.us, or phone 760-375-8566. The newsletter is generated about the 15th of the month and put into the mail at least the week prior to the meeting. This is your newsletter. SBMS Newsletter material can be copied as long as SBMS is identified as source.

San Bernardino Microwave Society newsletter

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